

Attention is directed to an apparently high-risk of attempted or threatened suicide in a cohort of young women who were pregnant before age 18. Factors related to suicide attempts are discussed and stress is placed on the need for preventive action, including early detection and intensive treatment of long duration for suicide-prone girls and for those who threaten or attempt suicide.

SUICIDE ATTEMPTS IN A POPULATION

PREGNANT AS TEEN-AGERS

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PREGNANCY, childbearing, and motherhood are normal biological events rather than disease processes, but even in the mature married woman they disturb the usual pattern of social life. For the teen-age girl, particularly if unmarried, pregnancy and the events which follow are especially likely to cause difficulty for the individual, those immediately associated with her, and society.

Other authors¹⁻³ have reviewed some of the problems associated with teen-age pregnancies, such as disrupted education, welfare dependency, and increased fertility. A review of the medical records of 105 pregnant females 17 years of age or younger admitted to the Yale-New Haven Hospital for delivery during 1959 and 1960 suggested an additional potential difficulty—the possibility of suicide—threatened, attempted, or actually committed. This study revealed that 14 of the young mothers were known to have made subsequently one or more self-destructive attempts or threats serious enough to require care or to be reported to a physician at the hospital.

The study population received its obstetrical care in the period before the emphasis on programs for teen-age mothers. Some were patients of private physicians, but the majority were seen by obstetrical residents, medical students, and staff physicians in the general obstetrical clinic.⁴ As a group they were offered no special social services, although in individual cases the need was so obvious that a social worker was assigned. They were excluded from school when their condition became apparent and limited educational alternatives were provided.⁵

Today in New Haven, and in many other cities throughout the United States, such girls are being offered programs that include unified medical care, augmented social services, and special educational provisions. It is hoped these programs will make a significant difference in the life of these young mothers and their children. Some reports are already indicating lower rates of medical complications among mothers and infants⁶ and decreases in early school terminations.¹ Studies now under way may show that the attention being

Table 1—Selected characteristics of patients who made suicide attempts or threats

No.	Age at first delivery 1959-1960	Race	Religion	Marital status at registration	At attempt			Agent(s)	Other significant problems or diagnoses
					Marital status	Completed pregnancies	Months since last delivery		
1	17	Black	Protestant	Single	Single	1	45	Wrist laceration	Two previous suicide attempts; termed "ambulatory psychotic" by psychiatrist — depressed, disoriented; pelvic inflammatory disease; much lung disease; lobectomy (1964)
2	15	Black	Catholic	Single	Single	2	20	Ammonia	Patient claimed she drank ammonia; examination was normal; returned to girls reformatory
3	15	Black	Protestant	Single	Separated	3	60	15 antihistamine tablets	Depressive reaction after marital separation
4	16	Black	Protestant	Single	Married	7	7	Sleeping pills	Pelvic inflammatory disease treated two days earlier
5	16	Black	Protestant	Single	Single	1	7-mo pregnant (2nd pregnancy)	12 anacin tablets	
6	16	Black	Protestant	Single	Married	1	20	Attempted to slash self with razor and to set clothes on fire	Hospitalized in state mental hospital (1961); marital quarreling; pelvic inflammatory disease

Table 1—Continued

No.	Age at first delivery 1959-1960	Race	Religion	Marital status at registration	At attempt			Agent(s)	Other significant problems or diagnoses
					Age	Marital status	Completed pregnancies since last delivery		
7	13	Black	Catholic	Single	17	Married	3	31	Hand laceration Put hand through window on Christmas Day; marital discord; blunt affect
8	17	White	Catholic	Married	18	Married	1	3	10-15 aspirin tablets Overdose of sleeping pills at age 14; took aspirin on 18th birthday after argument with husband
9	17	White	Catholic	Married	24	Separated	2	69	Wrist through window Treated in psychiatric clinic for severe psychoneurosis related to broken marriage; pelvic inflammatory disease
10	17	Black	Protestant	Single	18	Married	2	4	Jumped 3 stories Pelvic inflammatory disease
11	16	White	Catholic	Single	22	Separated	3	18	Tranquilizer Treated in psychiatric clinic; husband and boyfriend narcotics addicts
12	17	White	Catholic	Married	25	Married	3	33	Laceration of wrists Depressed; disoriented
13	17	White	Catholic	Married	17	Married	1	1	Threatened suicide and child abuse Acute anxiety one month post-partum; infant found bloody
14	17	White	Catholic	Divorced	18	Divorced	1	5-mo pregnant (2nd pregnancy)	Fearful of suicide and infanticide Previous suicide attempt with aspirin; hospitalized in state mental hospital for "nervous breakdown" (1958); seen frequently for anxiety

paid to the psychological aspects of pregnancy and the early child-rearing period result in mothers better able to cope with the physical and emotional problems of their environment. If the programs are able to accomplish these goals, a marked reduction in the number of self-destructive attempts or threats would be expected. This paper hopes to assist those responsible for programs for pregnant teen-agers by alerting them to the need for listening for possible hints of future irrational acts and by stressing the urgency of long-term follow-up of this population. Research personnel may wish to use rate of suicide attempts as an additional measure of the success of special programs.

Study Method

The information about self-destructive attempts or threats was found in the course of a study concerned with intervals between conceptions in a teenage population. The review of records was made at the Yale-New Haven Hospital in 1968, eight or nine years after the "index delivery" of 1959 or 1960. The group of 105 patients retained for study met the following three criteria: they were 17 years of age or younger and residents of New Haven at the time of the index delivery, and there was follow-up information available in the hospital chart for a period of at least two years thereafter. (Four exceptions were made to the latter criterion, where the records showed an additional pregnancy within a period of less than two years, although the follow-up stopped short of two years.) Such a review, limited to only one of the two area hospitals, and without a search of private physicians' records, certainly underestimates the number of suicide attempts and threats.

For the purpose of the hospital chart review, the following were classified as

self-destructive acts: any self-mutilation such as wrist-slashing, jumping from buildings, the ingestion of any substance which the patient might have thought to be harmful, and the ingestion in obviously excessive amounts of any medication. In addition, two patients whose records showed a threat or fear of suicide were included in this group, hereafter referred to as the "suicide attempt" group.

The first section of this paper will describe the 14 patients in the "suicide attempt" group and the attempts themselves. In the following section, the entire population of 105 meeting the previously described criteria for inclusion in the study will be analyzed to determine which characteristics are associated with a higher risk of suicide attempt or threat. Finally, the rate of suicide attempts in this obstetrical population will be compared with the rates reported by others.

Characteristics of the "Suicide Attempt" Group

Selected characteristics of the 14 patients who made suicide attempts or threats are shown in Table 1. They ranged in ages from 13 to 17 at the time of their first 1959-1960 delivery. Eight were black, six white, and eight were Catholic, six Protestant. At the time of registration for care, nine were single and five had been married. The latter were all 17 and white Catholics. Only one patient had experienced a pregnancy prior to the one in 1959-1960.

By the time they made the suicide attempt the patients ranged in age from 17 to 25. Eight were 17 or 18, one was 20, and five were 22 to 25. Eleven of the patients had been married by the time of the attempt, but four of these were already separated or divorced; three were still single.

In two cases the patient was pregnant with a second pregnancy at the

time of the suicide attempt. For the remaining cases, the median number of months which had elapsed between the last delivery and the attempt was 20, with a range of one month to 60 months. Four attempts were made in the first postpartum year and three of these were within four months of delivery. The median number of completed pregnancies at the time of the attempt was two.*

Varied methods of suicide attempts were recorded. Ingestion was the most common. Five women had swallowed excess amounts of tranquilizers, sleeping pills, aspirin, or similar substances, and one claimed to have drunk ammonia. Four were treated for lacerated hands or wrists. One patient jumped from a third story window, and another tried to cut herself with a razor and threatened to set fire to her clothing. In two cases, only a threat or fear of suicide was noted. In both there was also actual child abuse by the young mother or apprehension concerning infanticide.

Record review suggested that suicide attempts were often found in conjunction with the following:

Emotional Illness—Chronic psychiatric problems as well as acute episodes of depression or anxiety were noted in eight cases. Patients were described by terms such as ambulatory psychotic, depressed, disoriented, chronic anxiety, sociopath, and severe psychoneurosis. Patient No. 6 had an acute self-destructive psychotic episode requiring hospitalization. Patient No. 13 had "acute anxiety one month postpartum." Three patients—Nos. 1, 8, and 14—had histories of previous suicide attempts. Patient No. 7 put her hand through a window on Christmas Day and No. 8 ingested aspirin on her 18th birthday. These latter two cases suggest the importance of situational stresses.

* In Connecticut it was illegal for physicians to prescribe contraception or counsel its use until June, 1965.⁷

Marital Discord—Patient No. 3 ingested antihistamine pills "after marital separation." Patient No. 9 was seen repeatedly for psychoneurotic manifestations related to a broken marriage before being treated for a wrist laceration. Her husband "lives across the street with other women." Patients 6, 7, and 8 also had reported quarreling with their husbands.

Associated Physical Illness—Five of the patients were seen for gonorrhea or pelvic inflammatory disease. Occasionally suicidal attempts occurred in close temporal relationship to treatment for one of these conditions. One patient suffered from chronic suppurative lung disease.

Characteristics Associated with Risk of Suicide Attempt

Table 2 analyzes the frequency of suicide attempts in the study population by selected characteristics.

Age—The total study population ranged in age from 12 to 17 at the time of their first 1959-1960 delivery. Age at delivery did not appear to influence the risk of subsequent suicide attempt.

Race—There was no appreciable difference in the risk of suicide attempt between the white and the black mothers.

Religion—Twenty per cent of the Catholic patients were in the suicide attempt group as opposed to only 9 per cent of the Protestant patients. This excess risk of attempts among the Catholic mothers was found within each racial group, although the numbers were not large.

Marital Status—Subsequent suicide attempts were found in 22 per cent of those mothers who were single at registration but in only 7 per cent of those who were married at that time. One of the two who were separated or divorced

at the index delivery made a suicide attempt.

When marital status was controlled for religion, there was a suggestion of

independent association between each variable and suicide attempts. Being both Catholic and single was associated with approximately twice the risk found

Table 2—Frequency of suicide attempts by selected characteristics

Item	Total sample	Suicide attempts	
		No.	%
Total	105	14	13.3
<i>Age at delivery</i>			
15 and under	22	3	13.6
16 and 17	83	11	13.3
<i>Race</i>			
Black	58	8	13.8
White	47	6	12.8
<i>Religion</i>			
Catholic	40	8	20.0
Protestant	65	6	9.2
<i>Race and religion</i>			
Black:			
Catholic	4	2	50.0
Protestant	54	6	11.1
White:			
Catholic	36	6	16.7
Protestant	11	0	0.0
<i>Marital status at registration</i>			
Married	62	4	6.5
Single	41	9	22.0
Separated or divorced	2	1	50.0
<i>Marital status and religion</i>			
Single:			
Catholic	8	3	37.5
Protestant	33	6	18.2
Married:			
Catholic	30	4	13.3
Protestant	32	0	0.0
Separated or divorced:			
Catholic	2	1	50.0
Protestant	0	0	0.0
<i>Residence at index delivery</i>			
New Haven:			
Poverty areas	64	7	10.9
Nonpoverty areas	41	7	17.1
<i>Residence, race and religion</i>			
(a) New Haven, poverty area			
Black:			
Catholic	4	2	50.0
Protestant	37	3	8.1
White:			
Catholic	19	2	10.5
Protestant	4	0	0.0
(b) New Haven, nonpoverty area			
Black:			
Catholic	0	0	0.0
Protestant	17	3	17.6
White:			
Catholic	17	4	23.5
Protestant	7	0	0.0
<i>Birthplace</i>			
Connecticut	62	9	14.5
Other northern states	7	0	0.0
Southern states	34	5	14.7
Non-U. S. or unknown	2	0	0.0
<i>Source of care</i>			
None	8	1	12.5
Clinic	79	10	12.7
Private	18	3	16.7
<i>Outcome of delivery</i>			
Full-term live birth	94	14	14.9
Premature live birth	9	0	0.0
Stillbirth	2	0	0.0
<i>Parity</i>			
No previous pregnancies	91	13	14.3
One or more previous pregnancies	14	1	7.1
<i>Number of subsequent pregnancies</i>			
(To date of last follow-up)			
None	8	2	25.0
1-2	45	7	15.6
3 or more	52	5	9.6
<i>Complications of pregnancy</i>			
No complications of pregnancy	29	0	0.0
Complication of pregnancy recorded	76	14	18.4
<i>Venereal disease</i>			
Reported	24	5	20.8
None reported	81	9	11.1

among those who were either Catholic or single. No suicide attempts were found among the married Protestants.

Residence—The proportion of suicide attempts among mothers whose residence at the time of the index delivery was a nonpoverty area of New Haven (17%) was higher than the proportion of suicide attempts among mothers from poverty areas (11%).* Residence does not appear to alter the relationships found previously, i.e., there was no difference in risk between racial groups within each of the two residential areas, but Catholics showed higher rates than Protestants within each.

Birthplace—There was no clear association between any particular area of birth and a higher or lower risk of subsequent suicide attempt.

Source of Care—The risk of suicide attempt was slightly higher among patients receiving prenatal care from private physicians than among those cared for in the hospital clinics, or receiving no prenatal care at all. The numbers are too small to reach definite conclusions, but the trend is consistent with the finding of higher risk in pregnant girls from nonpoverty areas.

Outcome of Index Delivery—All of the suicide attempts were among mothers who delivered full-term live babies. No attempts were recorded among those delivering stillborn or premature infants.

Parity—Of the total population of 105, 91 were nulliparous at the index pregnancy and 14 were having a second or third child. There was no evidence that women of higher parity were at greater risk for subsequent suicide attempt.

Number of Subsequent Pregnancies—There was a higher risk of suicide attempt among those women who had no more than two subsequent pregnancies

* Defined as the lowest quartile nationally of the "Health Opportunity Index," developed by the Children's Bureau, based on the 1960 Census.

during the study follow-up period (17%) as compared to those with three or more subsequent children (10%). Only eight of the total population had no pregnancy subsequent to the index pregnancy; of these, two attempted suicide.

Complications of Pregnancy—Seventy-two per cent of the study population had complications recorded in the hospital chart with one or more of their pregnancies. These complications included such things as anemia, toxemia, infection, and hemorrhage. (Venereal disease was considered separately.) All 14 suicide attempts were among those who had complications recorded. None of the patients without complications were known to have made suicide attempts.

Venereal Disease—Almost one-quarter of the study population had a diagnosis of venereal disease recorded in the chart at some time. Those with this diagnosis had approximately twice the risk of subsequent suicide attempt (21% to 11%).

It is not possible to demonstrate statistical significance for the differences related to the above characteristics, primarily because of the small numbers involved. Chi-square tests show that only one of the above comparisons is significant at the conventional 5 per cent probability level. Consequently, the differences observed here are best regarded as suggestive leads. Further research may clarify the importance of the association of these factors with the risk of suicide attempts.

Relation to Other Studies of Attempted Suicide

Before any conclusions can be drawn about the possible relationship between suicide attempts or threats and teen-age pregnancy, it is necessary to determine whether the frequency of attempts is higher in this sample than in the gen-

eral population or in other adolescent groups. Although the incidence of suicide carried out to completion is relatively well known, at least for those cases reported to the medical examiner, few attempts have been made to develop directly an incidence rate of attempted suicide. Moreover, since previous studies have shown that major differences exist between individuals who make suicide attempts and those who actually commit suicide,^{8,9} extreme caution must be exercised in using suicide rates in connection with studies of attempts. An alternative method of deriving comparative figures is by using studies which have developed a ratio between attempted and completed suicide.

For the year 1957, Shneidman and Farberow⁹ collected information on completed suicides from the Los Angeles coroner's office; and on attempts from the records of the Los Angeles County General Hospital and the 16 Los Angeles municipal emergency hospitals, and from a questionnaire sent to all private physicians and osteopaths in the Los Angeles area. The hospitals reported 2,019 attempts and the doctors an additional 3,887 for a total of 5,906. Since there were 768 completed suicides in the same period, the over-all ratio between attempts and completed suicides was 7.69:1.*

Unfortunately, of those cases reported by doctors, data on only 633 were complete enough to analyze by demographic variables such as sex and age. Based on these incomplete data, the ratio of attempted to completed suicides for females of all ages was almost identical with the over-all rate, 8:1; for males it was only 1.5 to 1. For both sexes at ages 10 to 19, the ratio of attempted to completed suicides was considerably higher: about 18 to 1. The difference between the sexes in this age group is

* This figure is quite close to the less than 6 to 1 figure quoted by Stengel and Cook⁸ which they state is based on data from the police reports of Los Angeles and Detroit.

especially striking: for males the ratio was about 5 or 6 to 1, but for females it was between 69 and 78 to 1.† For all ages combined, barbiturates and poisoning accounted for 52 per cent of the female suicides and 63 per cent of the attempts (for males the comparable percentages were 17% and 43%); no breakdown of method by age is given.

Working in New York City where the reporting of accidental and intentional poisoning is mandatory under the city health code, Jacobziner¹⁰ developed a ratio of attempted to completed suicides based on reports of ingestion in the adolescent population. For the years 1960-1961, he found 568 attempted and 5 completed suicides by ingestion of chemical agents in the under-20 age group, yielding a ratio of over 100 attempts to 1 completed suicide.

Comparing the information from Jacobziner about attempts in 1960-1961 with his classification by sex and method of completed suicide in 1961-1962, the ratios for males and females were each found to be over 100 to 1. On the hypothesis that ingestion represents 50 per cent of the attempts among female teen-agers (as was found in our sample), the ratio for all methods would be about 50 to 1.

The discrepancy between these two sets of ratios (based on Shneidman-Farberow and Jacobziner) can be partially explained by differences in the study populations and research designs. The Jacobziner study depended upon reporting, which is less complete in attempted than in committed suicides. Shneidman and Farberow, on the other hand, sought out the information, although their success with returns from doctors was not outstanding. The smaller

† These ratios were extrapolated from Shneidman and Farberow's tables in which entries are rounded to whole percentage points. The ratios which can be deduced from these data have the following ranges: for both sexes 18:1 to 19:1; for males 5:1 to 6:1; for females 69:1 to 78:1.

size of the sample in the Jacobziner study also might result in greater variability. Sampling fluctuations and the rather crude methods used to produce comparable figures also may have contributed to discrepancies. Unfortunately neither study provides the data necessary for a more accurate estimate, since Jacobziner does not deal with suicide attempts other than by chemical ingestion, and Shneidman and Farberow do not classify their population by both age and sex.

In the study reported in this paper, 105 patients were followed for a total of 7,084 patient-months, or 590.3 patient-years. Thus there are about 590 "women years" of risk at average ages of 16 to 22 years. On the basis of the 12 mothers who made actual suicide attempts, this is a yearly rate of

$$\frac{12 \times 100}{590.3} = 2.03\%, \text{ or } 2,030 \text{ attempts per } 100,000 \text{ per year.}$$

In order to determine whether this rate of suicide attempts was larger than that expected among young females in an urban population, the rates based upon the Shneidman-Farberow and Jacobziner studies were applied to suicide rates from Cook County, Illinois, in 1959-1963¹¹ where the rate was 2.5 per 100,000 per year among females in the 15 to 24 age group. Applying this suicide rate to the estimated ratios of suicide attempts to suicides, one would expect between 173 and 195 suicide attempts per 100,000 per year using the ratios based upon Shneidman and Farberow's data, and 125 per 100,000 per year using the ratio based upon Jacobziner. The rate of suicide attempts in the study sample is roughly 10 times larger than the largest of these estimates.

Discussion

At least two alternative explanations can be advanced to explain the major finding of this study, that the rate of

attempted suicide among teen-age mothers is in excess of that which would be expected in the general urban adolescent population. The first explanation is that the stresses of pregnancy and child-rearing in some young girls are so enormous that they react by attempting suicide. An equally interesting possibility, however, is that the suicide attempt is not a direct result of the pregnancy, but that both the pregnancy and the suicide attempt stem from a common process. Both these events may represent disturbed behavior by adolescent girls. Girls who become pregnant in their teens may be demanding attention or trying to punish or inflict pain on their parents or other significant persons in their environment. Similarly, the suicidal act or threat may be a way of striking out or seeking revenge.

A study of suicide attempts in pregnant women by Whitlock and Edwards¹² seems to support this latter alternative. They noted that the "majority of suicidal attempts by the pregnant women were impulsive, often precipitated by violent interpersonal disputes which did not necessarily relate to the pregnancy. The women showed marked instability of personality and many had experienced life-long interpersonal and sexual difficulties. A follow-up survey of two-thirds of the patients showed that 37 per cent of the women continued to show major psychiatric disorders."

Further research would be necessary to determine whether either of the alternative explanations offered would account for the increased rate of suicide attempts or threats in this population.

Risk of Suicide Attempt

The data reported earlier in this article on the association between specific characteristics and suicide attempts suggest that a higher-risk group might be defined within a population of teen-age mothers. The factors associated with

an increased risk of suicide attempt within New Haven were: being Catholic, not having married, living in a nonpoverty area, experiencing a complication of pregnancy, and having a venereal disease at some time. The religion and marital status variables are especially notable since they run contrary to some studies of committed suicides. Since Durkheim's¹³ classic study, it has been assumed that committed suicides were lower among Catholics than other religious groups. Recently, this conclusion has been questioned.¹⁴ Relative to marital status, Seiden¹⁵ recently pointed out that although suicide is less frequent among married persons, this is not true in the young married population. Under the age of 24, and especially under 20, the death rates from suicide are higher among married men and women than among single men and women. Seiden suggests that "perhaps youngsters who marry in their teens are seeking to escape from unsatisfactory home environments, or perhaps early marriage, *per se*, introduces stresses which lead to suicide."

The fact that women who were single, Catholic, and not living at a poverty level were more likely to attempt or threaten suicide than other women who also had borne children in their teens would seem to suggest that the acceptability of the pregnancy in the women's social group might be a contributing factor. Certainly in almost all groups, regardless of age, it is more acceptable to be pregnant if one is married than if one is not. Catholic religious training places strong proscriptions on sexual activity outside of marriage.* Finally, although teen-age preg-

* Kinsey¹⁶ studied the association between religion and feelings of regret about premarital coitus among women. Although the differences were greater between the more or less devout within the religious groups, 35 per cent of the devout Catholics as compared to 23 per cent of the devout Protestant women regretted the experience.

nancies undoubtedly occur in large numbers in the middle and upper socioeconomic groups, in the public mind pregnancy at a young age is associated with illegitimacy and with the lower socioeconomic class. Therefore, when a teen-age girl who is single and/or Catholic and/or living above the poverty level finds herself pregnant, she may be more aware of the disapproval of her social group than she would be if she were a married and/or non-Catholic and/or a poverty-level teen-ager. This awareness of deviance from the norms of the group may make a suicide attempt or threat more likely.

Several of the findings indicate that those who attempt suicide represent a disturbed population: the high rate of venereal disease—which is often associated with promiscuity—and the frequent histories of emotional illness including psychiatric symptomatology, of previous suicide attempts, and of marital discord. Moreover, the high rate of pregnancy complications among those who threatened or attempted suicide, and the presence of physical illness in conjunction with several of the attempts suggest that physical conditions should not be overlooked. Venereal disease may be viewed as both an emotional and a physical factor.

The Significance of the Suicide Attempt

Given what appears to be an excess number of suicide attempts among women who become pregnant in their teens, a question can be raised about the importance of this act. Is committed suicide a real possibility in this population? If it is not, is the suicidal behavior important in itself?

Several studies have shown a high rate of completed suicide among those who previously attempted or threatened suicide, i.e., suicide attempters are a high-risk group for completed suicide.^{17,18} In addition, another study undertaken

by the authors of this paper uncovered two apparent suicides in an obstetrical clinic population which delivered from 1963 through 1965. One took place two years after delivery but while the girl was pregnant with her third child; the other, three years postpartum. Pugh's¹⁹ analysis of mental disease related to childbearing is also relevant to this question. Considering first admissions to Massachusetts mental hospitals, he found a large excess of admissions with psychosis during the first three months postpartum for childbearing women as compared to nonchildbearing women. The risk of hospitalization was highest at the extremes of age, including the 15 to 19 age group. In a personal communication, Pugh noted that 2 of the 75 women in this childbearing group later committed suicide, eight months and one and a half years postpartum respectively. These data suggest that although suicide carried to completion during pregnancy may be uncommon,* suicide is a significant risk in the postpartum period, particularly among those with a history of suicide attempts or of mental illness.

Even if completed suicide were not a significant risk, there would be important reasons to pay attention to the suicide attempt. First, physical harm to the woman or her infant is a frequent sequel of such attempts. Second, the attempt conveys a message to the environment. Rubenstein, et al.,²⁰ have suggested that a suicide attempt should be considered "not as an effort to die but, rather, as a communication to others in an effort to improve one's life." The message should not be ignored by the helping professions, even though it was originally directed to people important in the pregnant patient's life. The young

woman who attempts or threatens suicide is consciously or unconsciously signaling to the world that she needs help. If this alarm is not heeded, there may be dire consequences for the individual and her child.

Siegal and Friedman²¹ have commented on the impact of suicide threats: "The threat of suicide forces people to marry, prevents marriage dissolution, coerces companionship between persons despite their mutual infidelity, prevents marriages, forces parents to acquiesce in their offspring's vicious habits, precludes institutionalization, is rewarded by escape from military service, is used to obtain favored treatment over siblings, is employed as a device to avoid military induction, etc." Stengel and Cook⁸ criticize the negative connotations of this list and point instead to the "frequency with which the suicidal attempt was found to have been the only effective alarm signal to mobilize long overdue medical and social help." They feel that suicide attempts consciously or unconsciously have important social effects, i.e., they modify the human environment.

Prevention of Suicide Attempts

Finally, what can be done to prevent suicide attempts or to help those who have made them? Unfortunately society has made little progress toward solving the problem of the disturbed adolescent. The education of parents and the creation of a healthy emotional climate would appear to be the first line of prevention. In addition, some program suggestions can be made. The tendency of physicians to treat a suicidal remark as a meaningless gesture should be modified. It may be only a gesture in the sense that suicide has a low probability of occurring, but it is not meaningless. It is an important sign and should be treated vigorously.

The multidisciplinary programs for

* Actually such suicides may not really be uncommon but merely underreported. Newspaper accounts of suicide pacts between unwed adolescent couples often cite pregnancy as a factor.

teen-age mothers being developed across the country, with their concentration on individualized care for medical, educational, and social problems, should help detect patients at risk for suicidal acts, as well as provide the help which may make such a dramatic "alarm signal" unnecessary. It may be necessary, however, to mobilize additional psychiatric resources in order to provide individual and/or group therapy, not only for those who have already made a threat or attempt, but also for the high-risk group. Regardless of the reason for the suicide threat or attempt, the findings clearly indicate the need for increased concern with the psychological and emotional needs of the pregnant adolescent both during her pregnancy and for several years after delivery. They also suggest that the rate of suicide attempts may be another variable to study in the evaluation of special programs for this population.

Summary

A review of the records of 105 New Haven residents who were 17 and under when they delivered an infant revealed that 14 had subsequently attempted or threatened suicide. Comparison with other studies indicates that the rate of attempted suicide in this population is higher than would be anticipated. Within the total study population, the risk of attempting suicide was somewhat higher among single girls, Catholics, and those not from poverty areas. Suicide attempts were also associated with pregnancy complications and venereal disease. It is suggested that this excess of suicide attempts may be due to the stress of the pregnancy, or that both the pregnancy and the suicide attempt or threat may be forms of disturbed adolescent behavior.

The dangers of committed suicide or physical harm, and the "signal for help"

function of the attempt, strongly suggest the need for preventive measures including early detection and intensive treatment of long duration for both the suicide-prone and those who have threatened or attempted suicide.

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Environmental Tidbits

With the aim of keeping our environmental consciousness alive, the New York State Department of Environmental Conservation sends out periodic tidbits of information in the hope that editors will print them. Did you know, for instance, that every New York State citizen uses enough paper products annually to equal the combined weight of two good-sized football players? Or that the sonic boom from supersonic planes may threaten the hummingbird with extinction, according to ornithologists who say the sound waves might break its delicate eggs, making reproduction impossible? And did you know that antlers shed annually by deer are usually eaten by rodents to satisfy their craving for calcium and other minerals?

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